

WHAT IS CLAIMED IS:

1. A scanning optical apparatus in which an image writing light flux that is modulated by an image signal, emitted from light source means is 5 deflected by deflecting means to scan a surface to be scanned via imaging means, comprising:

ghost exposure amount calculation means for calculating a position on the surface to be scanned at which ghost light from a component of the scanning 10 optical apparatus disposed in an optical path through which a light flux emitted from said light source means passes appears and an exposure amount thereof, based on precedently stored relationship of the position at which ghost light appears and the 15 exposure amount thereof to the light flux emitted from said light source and on said image signal;

exposure amount control means for controlling an emitted light amount of the light flux emitted from said light source means or a pulse width of the 20 light flux emitted from said light source means based on a result of said calculation.

2. A scanning optical apparatus according to claim 1, wherein said ghost light includes light that 25 is generated by internal surface reflection of a scanning optical element included in said imaging means and arrives at said surface to be scanned.

3. A scanning optical apparatus according to  
claim 1, wherein said ghost light includes light that  
is reflected from a surface of a scanning optical  
element included in said imaging means and incident  
5 on said deflecting means again and arrives at said  
surface to be scanned.

4. A scanning optical apparatus according to  
claim 1, wherein said ghost light includes light that  
10 comes from a surface of a chassis supporting scanning  
optical elements included in said deflecting means  
and said imaging means and arrives at said surface to  
be scanned.

15 5. A scanning optical apparatus according to  
claim 1, wherein said precedently stored relationship  
of the position at which ghost light appears and the  
exposure amount to the light flux emitted from said  
light source is related to a main scanning direction.

20 6. A scanning optical apparatus according to  
claim 1, wherein said precedently stored relationship  
of the position at which ghost light appears and the  
exposure amount to the light flux emitted from said  
25 light source is related to a main scanning direction  
and a sub scanning direction.

7. A scanning optical apparatus according to  
claim 1, wherein a scanning optical element included  
in said imaging means comprises a plastic lens.

5 8. A scanning optical apparatus according to  
claim 1, wherein said light source means comprises a  
multi-beam light source that emits a plurality of  
light fluxes that are modulated independently.

10 9. A scanning optical apparatus in which a  
plurality of image writing light fluxes that are  
modulated by different image signals, emitted from  
plurality of light source means are deflected by  
deflecting means to opposite directions to scan a  
15 plurality of surfaces to be scanned via plurality of  
imaging means, comprising:

ghost exposure amount calculation means for  
calculating a position on the surface to be scanned  
at which ghost light from a component of the scanning  
20 optical apparatus disposed in an optical path through  
which a light flux emitted from said light source  
means passes appears and an exposure amount thereof,  
based on precedently stored relationship of the  
position at which ghost light appears and the  
25 exposure amount thereof to the light flux emitted  
from said light source and on said image signal;  
exposure amount control means for controlling

an emitted light amount of the light flux emitted from said light source means or a pulse width of the light flux emitted from said light source means based on a result of said calculation.

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10. A scanning optical apparatus according to claim 9, wherein said ghost light includes light that is generated by internal surface reflection of a scanning optical element included in said imaging means and arrives at said surface to be scanned.

11. A scanning optical apparatus according to claim 9, wherein said ghost light includes light that is reflected from a surface of a scanning optical element included in said imaging means and incident on said deflecting means again and arrives at said surface to be scanned.

12. A scanning optical apparatus according to claim 9, wherein said ghost light includes light that comes from a surface of a chassis supporting scanning optical elements included in said deflecting means and said imaging means and arrives at said surface to be scanned.

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13. A scanning optical apparatus according to claim 9, wherein said precedently stored relationship

of the position at which ghost light appears and the exposure amount to the light flux emitted from said light source is related to a main scanning direction.

5        14. A scanning optical apparatus according to claim 9, wherein said precedently stored relation of the position at which ghost light appears and the exposure amount to the light flux emitted from said light source is related to a main scanning direction  
10 and a sub scanning direction.

15        15. A scanning optical system according to claim 9, wherein a scanning optical element included in said imaging means comprises a plastic lens.

15        16. A scanning optical apparatus according to claim 9, wherein said light source means comprises a multi-beam light source that emits a plurality of light fluxes that are modulated independently.

20        17. A scanning optical apparatus according to claim 9, wherein said ghost light includes light reflected from a surface of a scanning optical element included in said imaging means and arriving  
25 at an opposite surface to be scanned.

18. An image forming apparatus comprising:

a scanning optical apparatus according to any one of claims 1 to 17;

a photosensitive member disposed at said surface to be scanned;

5 a developing device for developing an electrostatic latent image formed on said photosensitive member by a light flux scanned by said scanning optical apparatus as a toner image;

10 a transferring device for transferring said developed toner image onto a transfer destination material; and

a fixing device for fixing the transferred toner image on the transfer destination material.

15 19. A color image forming apparatus comprising: a scanning optical apparatus according to any one of claims 9 to 17;

a plurality of photosensitive members disposed at said plurality of surfaces to be scanned;

20 a plurality of developing devices for developing electrostatic latent images formed on said photosensitive members by light fluxes scanned by said scanning optical apparatus as toner images;

a transferring device for transferring said developed toner images onto a transfer destination material; and

a fixing device for fixing the transferred

toner image on the transfer destination material.

20. An image forming apparatus comprising:  
a scanning optical apparatus according to any  
5 one of claims 1 to 17; and  
a printer controller that converts code data  
input from an external device into an image signal  
and input it to said scanning optical system.

10 21. A color image forming apparatus comprising:  
a scanning optical apparatus according to any  
one of claims 9 to 17; and  
a printer controller that converts code data  
input from an external device into an image signal  
15 and input it to said scanning optical system.